The Topics in Medieval Logic

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ABSTRACT: The topics is a theory of argumentation based upon *topoi* or in Latin *loci*. The medieval logicians used works by Aristotle and Boethius as their sources for this doctrine, but they developed it in a rather original way. The topics became a higher-level analysis of arguments which are non-valid from a purely formal point of view, but where it is none the less legitimate to infer the conclusion from the premiss(es). In this connection the topics give rise to a number of discussions about the form and the matter of arguments. Further the topic contribute to the elaboration of the important doctrine of the second intentions, i.e. higher-level concepts of the particular things. In some respects the topics may be said to form a link between formal and informal logic. The topics vanished as a part of logic at the end of the Middle Ages, perhaps because the medieval logicians never got rid of Boethius' claim to have compiled a complete list of the loci, which was an unlucky one. The topics does not have an exact parallel in modern formal logic, but some reflections on non-formal argumentation by recent authors contain certain resemblances to it.

KEY WORDS: Antecedent, consequent, conditionals, dispute, higher-level (language, concept), maxims, rhetoric, syllogism, topical relation, universal (concept), validity.

The medieval Latin poet Walter of Chatillon (second half of the 12th century) says in one of his poems: ... *sic locus a maiori tollens opprobria* ("in this way the locus from the greater eliminates the reproaches") (Strecker (1925), no. 26, 2, 7—8. — cf. Strecker (1929), no. 45, 19, 2; no. 136, 12, 1). The line is a joke which can only be appreciated by people who know something about medieval logic. The editor of Walter's poems, Karl Strecker, could only confess that he failed to understand the verse. More interesting, though, is the fact that a medieval Latin poet could count on his audience to be so well acquainted with the university teaching of logic, and in particular with the part of logic which was called the topics, that he could refer to it in jest. This indicates that the topics was part of the general culture to such an extent that it deserves the attention of a wider public than the specialists of logic.

The topics[1] has got its name from the Greek word *topos* which means 'place'. In its metaphorical use in our connection it means something like 'the point of departure' for an argument.

When and where the discipline of the topics originated in ancient

Greece is probably impossible for us to trace. We encounter the topics as a relatively well-established doctrine in Aristotle, who deals with it both within rhetoric (in the *Rhetoric*) and within logic (in the *Topics*). As far as I can judge Aristotle makes no — or very slight — difference between the topics in logic and rhetoric. In both fields the topics served as a method of argumentation or rather as a technique for testing arguments or commonly held opinions.

The background against which the topics developed is best understood if we think of Socrates as Plato describes him in his dialogues. Socrates approaches someone who thinks that he knows what justice, virtue, piety etc. is. When Socrates asks this person to explain and defend his standpoint it quickly turns out that he cannot state any reasons for his opinion, and he will end in contradictions or easily be refuted by Socrates.

Aristotle's concept of a locus (cf. De Pater (1965), pp. 93sq.; 129—139. — Stump (1978), p. 160sq. — Green-Pedersen (1984), p. 20sq.) is really a systematisation of Socrates' procedure. He imagines a dispute taking place between two interlocutors: an answerer (in later Latin terminology: respondent) who must choose the one of two alternative standpoints and then defend it. The other is the questioner (opponent in later Latin terminology) whose task it is to attack the standpoint taken by the answerer. Aristotle normally expounds the *topoi* or loci (as I will call them in the following) as they are used by the questioner. The schema of a locus is this:

1. a.   See if the other part states/means that . . .
   b.   Then do/say/ask . . .
2.   Because . . .

Thus a locus consists of an instruction and a "reason". One might suppose that the instructions could be of all kinds, and to some degree this is true. In practice, however, Aristotle's text shows a tendency to concentrate upon a number of standard procedures, such as checking the genus, species, or specific difference of the thing under debate or some kind of opposite to it. The "reason" is a proposition which is used to confirm an inference. These propositions are of very heterogeneous types: a few are logical laws, i.e. propositions which are true by their form whatever terms occur in them; others are necessarily true as a consequence of the definitions of some of the central concepts of Aristotle's metaphysical thought (the majority of these are statements about 'genus, species' etc.); finally a number of these propositions are immediately convincing, difficult to refute, and in most cases true, but neither always nor necessarily. It is impossible to state in a general form how Aristotle thinks that these "reasons" function in the arguments, and it is even possible that there are some loci — expressly called so by Aristotle — for which it is impossible to find any such "reason". On the other hand there are also a few loci

where it seems difficult or impossible to find an instruction in Aristotle's text.

In modern times it has been much debated whether it is the instruction or the "reason" which Aristotle considers to be the locus (De Pater (1965). — Stump (1978)). In my eyes this debate should never have been started; for the very distinction between "instruction" and "reason" is rather the interpretation of Aristotle by succeeding generations than it is Aristotle's own conception of the locus. This is clear from the fact that there are a number of loci — expressly called so by Aristotle — where it is impossible to draw a clearcut distinction between the two elements. It should be added, though, that this interpretation quite correctly detects a tendency which is present in Aristotle's manner of expounding the loci. Yet it seems to me that Aristotle's conception of the locus was so broad that it cannot be rendered in a simple and precise definition (cf. Green-Pedersen (1984), pp. 24—28).

The name which Aristotle uses about the topics is 'dialectic', and this is an important discipline for Aristotle, since it helps us to discover the principles of the various sciences. According to Aristotle any science is based upon a number of necessarily true axioms from which all other propositions belonging to the same science are deduced. The axioms cannot be proved or inferred within the science itself, but must be discovered in some other manner and be grasped as self-evidently true. It is the primary task of dialectic to lead us to the recognition of the principles of the sciences by testing and sifting commonly accepted opinions (*endoxa*) (Aristotle, *Topics* I, 2, 101a 34—b 4). Hence the premisses in dialectical arguments are and must be plausible propositions, i.e. such as are accepted as true but not known to be true, and possibly they are in fact false; the same counts for the conclusions. Put in another manner this means that the topics can never develop into a purely formal discipline, because an inference from false premisses to a false conclusion which is perfectly valid from a formal point of view is not a dialectical or topical argument. In order to be that the argument must contain plausible propositions, otherwise it cannot fulfil its task, which is to lead us to the foundations of the sciences. Evidently plausibility is connected with the contents of an argument and not with its form.

The development of the topics between Aristotle and Boethius (c. 480—524 a.D.) is known to us only in glimpses, and is very difficult to trace, because practically all the sources are lost. It is bound up with the development of the demonstrative sciences and of rhetoric, and it is both important and interesting (cf. Ebbesen (1981), pp. 106sq.). Yet it is impossible to deal with it here in an adequate manner, and I will turn directly to Boethius.

According to him the term 'locus' designates two things: either a maxim (*maxima propositio*), i.e. a self-evident (*per se nota*) and highly general

proposition which cannot be proved by anything else, but can be adduced as a proof of other propositions; or other propositions can be deduced from the maxim. These maxims constitute a development of the element of Aristotle's locus which I called the "reason". Boethius defines and describes the maxims as if they were propositions of the same nature as the axioms which Aristotle assigns to the demonstrative sciences. In practice, however, his maxims are just as heterogeneous as Aristotle's "reasons" (cf. Stump (1978), pp. 182; 188—189. — Green-Pedersen (1984), pp. 60—63).

The development which Aristotle's "instruction" has undergone is more interesting, since Boethius uses it as the basis for a classification of the maxims. Any maxim is a compound sentence containing three terms (though it is often necessary to reformulate Boethius' maxims slightly in order to bring this out clearly). One term is common to both the constituent sentences, and the other two occur only in respectively the first and the second of the two sentences of the maxim. Boethius calls the term occurring only in the first sentence the "differentia" of the maxim, i.e. that by which a maxim differs from other maxims or that by which it belongs to a particular class of maxims. Now, the number of maxims is unlimited, according to Boethius, but the number of the differentiae is limited, even small (Boethius, *De differentiis topicis* 1186B): Boethius enumerates 28 differentiae (cf. Green-Pedersen (1984), pp. 46—54), though it is difficult to see why he thinks that this list is exhaustive (cf. Green-Pedersen (1984), pp. 74—75). All the maxims which have the same term in their first sentence belong to the same differentia. In this way Boethius is able to compile a manageable list of the maxims, which Aristotle could hardly do.

Like Aristotle, Boethius states that the topics is connected with plausible standpoints; but this seems to have lost its importance to him. In his eyes the topics is rather a particular manner of confirming arguments (cf. Green-Pedersen (1984), p. 66sq.). Someone may doubt if justice is advantageous. In order to settle this question he must first look for something about which 'advantageous' is predicated with certainty. After that he must make sure that 'justice' and this other thing are related in a manner which is a particular instance of one of the differentiae. The man will perhaps start by running through his list of differentiae, and he may stop at the one called the locus 'from the genus' (*a genere*). For evidently 'justice' is a species of the genus 'virtue', and the man will of course know — or from his general cultural attitude be convinced that every virtue is advantageous. Thus by help of the differentia our man has now obtained the premises which are required for his argument:

1. Every virtue is advantageous
2. Justice is a virtue

3. Therefore justice is advantageous.

Further the man will adduce one of the maxims under the locus 'from the genus': "what is predicated about the genus is predicated about the species". This maxim grants him the right to pass from the premisses to the conclusion. According to Boethius, then, the differentia and the maxim have separate functions in the arguments. The differentia helps us to establish the premisses, while the maxim confirms our right to pass from the premisses to the conclusion. This at least seems to me the most natural explanation of Boethius' ideas about the function of the locus in arguments, but he nowhere expounds his ideas himself, but leaves it to us to interpret his examples (cf. Stump (1978), p. 183sq. — Ebbesen (1981), pp. 118—119 for different interpretations).

Boethius is not particularly clear in several respects, and furthermore he is evidently acquainted with more than one tradition about the topics, as it is part of logic. These various traditions he attempts to combine (cf. Green-Pedersen (1984), pp. 73—76), and in addition he compares with the tradition of the topics within rhetoric (cf. Green-Pedersen (1984), p. 58) which by now is completely different — in contrast to the time of Aristotle.

The Middle Ages is a long period, and its earliest and latest parts are completely dissimilar. This is true about logic as well as in all other respects. The primitive and almost groping teaching before the 11th century certainly has its attractive sides and deserves a closer study than it has hitherto received. Yet it is an entirely different world from the highly technical, advanced, and systematic teaching of the 14th century.

Before c. 1050 the medieval doctrine about the topics is based upon Cicero's *Topics* or the three compendia of learning from Late Antiquity: Martianus Capella, Cassiodorus, and Isidorus who all three are totally dependent upon Cicero, as far as the topics is concerned. In Boethian terminology Cicero's *Topics* consists of a list of differentiae. Similarly the earliest medieval textbooks contain little more, and it is unclear how the authors thought that the loci function in arguments. We meet, however, a surprising and interesting idea that the topics and hypothetical syllogisms are connected. This idea is both un-Aristotelian, un-Boethian, and un-Ciceronian, and possibly it arose by a misreading of certain sections of the sources (cf. Green-Pedersen (1984), p. 140sq.).

From around the middle of the 11th century Boethius' works on the topics dominate in the schools, while Cicero and the old compendia are hardly used any more. Aristotle's *Topics* is only used from around the middle of 12th century, and by that time the medieval logicians had already formed some standard ideas about the topics which the introduction of Aristotle's work could no longer change. Boethius' *De differentiis topicis* remained basic for the medieval conception of the loci, even to the degree that the commentators interpreted Aristotle against the background of Boethius (cf. Green-Pedersen (1984), p. 107sq.).

The standard medieval description of the function of the loci in arguments was among the things which took shape in the 12th century before the introduction of Aristotle (cf. Green-Pedersen (1984), pp. 177–178; 189sq.). Suppose we are in doubt whether Socrates is an animal, or in other words: can we predicate 'animal' of 'Socrates'? In order to settle this question we must find a middle term which is predicated of 'Socrates' and of which 'animal' is predicated. We discover this third term by subsuming one of our original terms under a general concept, in our case we might choose 'genus', as the concept 'animal' is certainly a genus, according to Aristotelian philosophy. Now, the concept 'genus' is not an absolute but a relative one, i.e. a genus is always a genus of a number of species. Can we find a species of 'animal' which is predicated of Socrates? Certainly, Socrates is evidently a man. Hence we may now write down this argument:

1. Socrates is a man

2. Therefore Socrates is an animal

in which 'man' is the middle term. Still, the argument is formally invalid, we cannot pass from the premiss (1) to the conclusion (2). Therefore we must take resort to a maxim under the locus of the middle term. The locus (= differentia) of 'man' is 'species', and one of the maxims under this locus says: "of whatever a species is predicated also its genus is predicated". This sentence is necessarily true, provided that the definitions of 'genus' and 'species' remain as they are, and it plainly grants us the right to pass from the premiss to the conclusion in our argument. Or we might prefer to say that by help of this maxim we are entitled to substitute 'animal' for 'man' in the proposition 'Socrates is a man'. It is important to note that the maxim is not in any way inserted in the argument as a sort of premiss, but remains a rule which governs the procedure.

What, then, is the function of the loci with regard to such arguments? The first thing to note is that the words in the arguments belong to our object-language, i.e. the language about the things which surround us. The words occurring in the maxims and the words for the differentiae, on the other hand, belong to a second- or higher-level language, i.e. the language about our every-day language or object-language. Hence the loci constitute a higher-level analysis or description of the procedure in the actual arguments. In other words: the loci do not make the arguments valid, but only explain why we may infer the conclusion. Modern logicians who adhere to the so-called natural-deduction style of logic express a somewhat similar thought when they speak of expounding the "underlying logic".

The higher-level status of the loci is described in various manners in the 12th century, but the most important and interesting discussions of it

occur in the 13th century where the topics already from the beginning is involved in the creation of the doctrine of the second intentions (cf. Green-Pedersen (1984), p. 223sq.). These are second- or higher-level concepts, and very briefly stated the medieval logicians think that they are formed in this manner: when we are confronted with a concrete particular thing we may form a concept of what it is. About Socrates, e.g., that he is a man. This concept is a first intention. Further we may form the concept that 'man' is a species of the genus 'animal', separated from other species by its specific difference. These concepts are second intentions. They are formed from the first intentions and used to describe and analyse the relations between these. They can be used in this manner, because all second intentions are relative concepts, in contrast to first intentions which are absolute ones.

The doctrine of the second intentions is central to the medieval logic, it connects with almost all important parts of logic, and the various standpoints the authors take concerning the second intentions have far-reaching philosophical implications. The history of the doctrine of the second intentions has not yet been written, and particularly its early period is still obscure. There are, however, few texts which give better information about the development of this doctrine in the first half of the 13th century than the works dealing with the topics. I will even suggest that the reflections on the status and function of the loci have been instrumental in the elaboration of this doctrine.

Let us turn back to the example which was used to illustrate the function of the loci. As mentioned, the argument is formally invalid, and the maxim changes nothing about this fact. The invalidity is easily shown if we substitute 'stone' for 'man' in the premiss. Then we can no longer pass to the conclusion, not even by help of the maxim. This means that our argument depends upon (the meaning of) the terms occurring in it. The medieval logicians were well aware of this fact, and utilized it for a number of reflections about the form and matter of arguments and about arguments that are valid due to their form versus those where the conclusion can be inferred for other reasons (cf. Pinborg (1969), pp. 160–170. — Green-Pedersen (1984), pp. 197–201).

The matter or material side of an argument is the meaning of its terms, and therefore depends upon the nature of the things which the terms of the argument represent or stand for. The form, in contrast, includes such things as the number and arrangement (in Latin *complexio*) of the terms and the words which contribute only to the syntax of the propositions, such as 'all, not, if, therefore', and the arrangement of these words. The standard medieval example of an argument which is valid due to its form is the categorical syllogism, where the loci have no function to perform, according to the majority of our 12th-century authors. It does not matter what the terms in a syllogism mean, it will be valid provided only that their

number and arrangement is correct, and the rules about universal, particular, and negative premisses are observed. Obviously the same is not true about the arguments confirmed by the loci. On the other hand, as we have seen, the loci confirm the arguments by subsuming their terms under some general or universal concepts, such as 'genus', and these concepts as such are not dependent upon the particular things for which the terms of the arguments stand. This means that there are elements in the procedure that connect with the syntactic or formal side of the arguments, though we would have to enlarge the concept of form in comparison with the use of this term in modern logic (cf. Green-Pedersen (1984), pp. 185; 200).

Another point to note about the example of an argument which we used is that if we connect the two propositions not by 'therefore' but instead insert an 'if' in the beginning of the first proposition then we obtain a conditional sentence. In fact a number of textbooks from the first half of the 12th century (cf. Stump (1982), pp. 278—281. — Green-Pedersen (1984), pp. 190—191; 203sq.) contain sections about conditionals in which they treat these as belonging to the logic of terms and where they adduce the loci in order to secure the inference of the consequent from the antecedent. This approach to conditionals is rather unusual to us, but those sections in the textbooks should not be overlooked. I suspect that they contain some of the earliest comprehensive attempts at the creation of a systematic theory of consequences.

As far as the topics is concerned, however, these textbooks constitute almost a tradition of their own, which may go back to the connection between loci and hypothetical syllogisms in the earliest medieval textbooks. They even compile a particular list of loci. In the commentaries on Boethius' and Aristotle's works on the topics hardly anything is said about conditionals. Furthermore only very few works later than the middle of the 12th century represent this tradition, it seems to have vanished during the last half of the century.

The ideas about the function of the loci in arguments which have been sketched above remained standard for the rest of the Middle Ages, also after Aristotle's *Topics* had been introduced in the teaching of the schools and universities in the second half of the 12th century. By then the medieval conception of the topics was so firmly established that Aristotle's book could not basically change it. Yet Aristotle forced the medieval commentators to face the problem about the loci and syllogisms from a new angle.

The point which gave rise to debate is Aristotle's brief statement on the first page of his *Topics* that in connection with the topics we argue by help of the dialectical syllogism which is characterized by having plausible premisses (Aristotle, *Topics* I, 100a 21—30). Nowadays Aristotle is generally taken to use 'syllogism' in a broad sense meaning little more than 'argument', and not in the technical sense known from his *Prior Analytics*.

This idea never occurred to the medievals, they did not entertain even the slightest doubt that Aristotle meant syllogism in the technical sense in this passage.

Accordingly the medieval commentators had to consider the problem how the loci function in a dialectical syllogism, in spite of the earlier separation of the loci from the syllogism. One thing they never did: the syllogism qua syllogism was never claimed to be validated by the loci, but always by its form, i.e. the figures and moods. (Admittedly there are a few traces of a discussion whether the *dici de omni* is a locus or not, but it is doubtful if any author ever supported this opinion (cf. Green-Pedersen (1984), pp. 256—258)). Some of the earliest commentators on Aristotle's *Topics* explain, however, that a locus adds an extra or second form to the dialectical syllogism consisting in the topical relation (*habitudo localis*) between its terms. As we have seen above, it is quite reasonable to consider the locus as contributing to the form of an argument, though not in the ordinary meaning of 'form'. Yet the idea rapidly dissappears again (cf. Green-Pedersen (1984), pp. 255—256), and the more common opinion is that the loci cause the premisses of the dialectical syllogism to be plausible propositions, i.e. propositions which are commonly taken to be true, even though it may turn out that they are in fact false (Green-Pedersen (1984), pp. 303—304).

The loci have this effect because they are second intentions, and these do not derive from the essence or the nature of the various things, but apply equally well to things of different kinds or categories, and similarly the same thing may be subsumed under several different second intentions. Hence there is only an accidental relation between a second intention and a particular thing, and it is impossible to conclude from a second intention to a specified particular thing, or the other way around, with certainty (cf. Green-Pedersen (1984), pp. 237—238).

The dialectical syllogism is therefore characterized by the fact that its premisses are plausible propositions and lead to a plausible conclusion. Upon this idea the medieval logicians build a distinction between what they call the inferring and the proving syllogism (*s. inferens — probans*). The first of these is the syllogism as such where all that matters is that it must be valid, i.e. the conclusion must follow from the premisses. It would be no objection, however, if both the premisses and the conclusion are false. The proving syllogism, on the other hand, is an argument in the strict sense of this term, i.e. it leads us to accept as true or at least plausible a proposition which was hitherto doubtful. Secondly the conclusion in the proving syllogism must be a different proposition from both the premisses, and not just the same (cf. Green-Pedersen (1984), pp. 311—312).

If we stop here and look back, we may notice that even though the medieval authors — if questioned — would without hesitation assert that the topics was part of logic, all the reflections which we have followed

nevertheless tend to separate the topics from the type of formal logic which we are acquainted with from modern textbooks on logic. This observation contributes to calling our attention to a difference in character between modern formal logic and medieval logic. In the Middle Ages logic was always concerned with the analysis of our language and our actual arguments, and it received no particular inspiration from mathematics.

All the doctrines sketched above had been elaborated and established at least by the end of the 13th century. After that time we meet very few new ideas about the topics. The 14th century is otherwise an extremely interesting and attractive period for logic, but the topics seems to have lost the attention of the authors. Admittedly the section on the topics in Jean Buridan's *Summulae* and his own commentary on it is one of the most concise, instructive, and intelligent texts about the topics from the whole Middle Ages, but it contains very little which is really original (cf. Green-Pedersen (1976)).

The situation is even worse in the 15th century, and this may be surprising, for the topics enjoys quite a success in other fields than logic in that period. This is true in particular of the so-called humanist movement where we encounter frequent attempts at establishing some manners of reasoning and arguing which constitute an alternative to the scholastic logic. The author who stands closest to the medieval tradition which we have discussed is Rudolphus Agricola whose book *De inventione dialectica* (c. 1480) contains quite a lot about the topics. Certainly he shows signs of influence from the ideas of the medieval tradition, but he omits or disregards the features which connect with logic and rather takes the topics to belong to rhetoric (cf. Green-Pedersen (1984), pp. 329—330).

One may ask why the topics suffered such a decline. Part of the explanation probably lies in the fact that — in spite of various attempts — the medieval authors never liberated themselves from the list of loci which they inherited from Boethius' *De differentiis topicis* (cf. Green-Pedersen (1984), pp. 46—54), and which he claimed was an exhaustive one. If such a list should really be satisfactory it ought to collect and classify different foundations for arguments in various fields in a highly general form. Perhaps Boethius attempted to enumerate all the possible aspects from which we may describe a thing and the various relations in which it may stand to other things (cf. Green-Pedersen (1984), pp. 74—75). This may be a good idea, but it is hardly enough. Furthermore, at some of his loci it seems impossible to state maxims which are necessarily true or by which the conclusions follow from the premises with necessity.

If the topics should develop into a really useful discipline the very idea about a limited list of loci is probably wrong. It would presumably be necessary to recognize that within every single subject-matter there are a number of fundamental concepts, the definitions of which may be points of departure for arguments of the type we have met in the topics. Maybe

such a method would resemble the ideas which have been expounded by Stephen Toulmin (Toulmin (1958)) or Chaim Perelman (Perelman & Olbrechts-Tyteca (1958)).

NOTE

[1] Readers who miss references to the sources and to modern scholarly literature are generally referred to Green-Pedersen (1984); Stump (1978 & 1982); De Pater (1965) and the references given there.

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